

*Jan Mertl**

INNOVATIVENESS OF SMALL AND MEDIUM ENTERPRISES AS A MEANS TO INCREASE THEIR MARKET COMPETITIVENESS

1. INTRODUCTION

Small and medium-sized enterprises play an important role in the economy as they drive its growth and development. SME companies have the ability to effectively enter the market niches and quickly adapt to the demands and expectations of customers. They respond to changes in demand and supplement its deficiencies much easier and faster compared to large companies oriented towards mass and lot-size production.

The aim of the paper is the assessment of competitiveness of Polish small and medium enterprises, in particular their innovativeness as one of the most important sources of competitive advantage for enterprises. It was assumed that there exists a fundamental connection between activities taken by small and medium enterprises to gain a competitive advantage and innovativeness of these enterprises. In order to verify this fact, the survey research of domestic companies in the SME sector was carried out. The main objective of the study was to find the answers to the questions if Polish enterprises that introduce innovations increase their chances to achieve a high market position, what innovations ought to be introduced in order to increase their competitive advantage, as well as what the main factors that influence the introduction of novelty in companies are.

The level of competitiveness in enterprises was analysed and new or improved products introduced into the market, as well as new processes implemented in the surveyed companies, were identified.

2. THE SIGNIFICANCE OF INNOVATIONS FOR THE DEVELOPMENT OF THE ENTERPRISE

The term innovation defines new, hitherto mostly unknown solution, which finds practical application that enables the company to meet the expectations and demands of its customers.

* PhD. Eng., Department of Entrepreneurship and Industrial Policy, Faculty of Management, University of Łódź, 22/26 Matejki Str., 90-237 Łódź.

Innovation has a significant impact on today's enterprises and concerns all their functions: technique and technology, marketing, finances, management and logistics. At every stage of innovation implementation, companies can gain a considerable competitive advantage in the market¹.

Innovations that derive from the company's activities and innovations introduced in the production of goods or products, oriented towards reducing the costs of goods and the whole production process, are the factor that increases the cost competitiveness. It is important to improve the processes that make up the value chain as they have a great impact on cost competitiveness of the enterprise. The introduction of such innovations is the most effective form of product differentiation. The quality and innovativeness in the area of products are seen as the most important factors in the international competitiveness of enterprises.

The aspiration to introduce innovations results mostly from the pressure exerted by competitors. It may also originate from the observations made by the company's management that the company is losing its innovative ability, as well as from the awareness that the introduction of innovations is an effective factor in the competitive strategy. Such a company allocates an increasingly growing budget to the introduction of innovations or to the creation of the proinnovative culture among the company's employees, which contributes to more effective innovation management².

Innovations that have an impact on reducing direct manufacturing costs per unit of a given product also determine the current and future competitiveness. This competitiveness increases and can cause the price reduction that allows to maintain and even improve to some extent the value of the ratios concerning sales profitability, assets and equity. As a result – by achieving a better competitive position in the given sector – the company has easier access to external sources of funding. In this situation the company can increase its profitability and achieve financial surplus even when it does not lower the price after reducing the costs. The funds saved can then be spent on innovation activities. Owing to increased competitiveness, the enterprise is able to obtain a very favourable credit conditions and can also expect to improve the company's image.

In the case of competitiveness of small and medium enterprises, creating and strengthening the environment that fosters innovativeness and the introduction of innovations is very important. The cooperation of entrepreneurs with scientists and other R&D sector employees can be treated as one of the most important factors that determine the company's success in terms of competitiveness. It should be said that innovations in the system of education, as well as in the organisation

¹ S. Conway, F. Steward, *Managing and shaping innovation*, Oxford University Press, Oxford 2009, p. 29 and onwards.

² H. Brdulak, T. Gołębiowski, *Wspólna Europa. Innowacyjność w działalności przedsiębiorstw*, Difin, Warszawa 2003, p. 15–18.

and the functioning of basic and applied research, contribute indirectly to ensuring the competitiveness of economies³.

Innovativeness – defined as an instrument to shape competitiveness – is reflected in short, medium and long-term perspectives. Taking these periods into consideration in their functioning, enterprises increase the effectiveness of measures taken in order to increase competitiveness. Innovations introduced over a short period of time usually concern unconventional methods to carry out current tasks. In the present market climate, people responsible for the development of companies need to be highly qualified so as to be able to control the situation all the time and introduce appropriate changes that facilitate implementing the tasks assigned. Short-term innovations include organisational innovations that lead to the improvement of work methods in every area of company's operation. As a result, the lead times for carrying out current tasks get shortened and the time saved can be allocated to conceptual work, analysis and considerations concerning the future of the company.

The ability to notice innovations, i.e. the ability to associate the observed events with the previously learnt patterns, as well as the ability to use the acquired knowledge, obtain resources and use them to achieve success is a challenge for companies' employees. It is the case of innovative maturity that shapes the desirable attitudes among the workers employed in the company.

Innovation realised over the medium term is connected with the ability to find methods of increasing the operational efficiency by cost reduction. Innovative solutions are introduced in the processes already implemented. Process innovations that aim at streamlining production processes and improving technology are the result of this type of innovativeness. This type of innovativeness requires more time for proper preparations (often trial series are made first), however, innovations on this level definitely make maintaining competitive advantage easier.

The mechanism of innovativeness spread over the long-term is connected with introducing alternative technologies and entirely new products. This type of innovativeness is definitely the most important factor and source of competitive advantage⁴.

The constant increase of competitiveness is most often the factor that motivates the introduction of innovations in Polish enterprises. Entrepreneurs often make the strengthening of their own position among the competitors their main objective. In order to meet the set objective, the introduced innovation must be favourable from the perspective of both the buyer and the overall market situa-

³ W. Świtalski, *Innowacje i konkurencyjność*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2005, p. 145–148; J. Baruk, *Zarządzanie działalnością innowacyjną*, [in:] M. Brzeziński (red.), *Zarządzanie innowacjami technicznymi i organizacyjnymi*, Difin, Warszawa 2001, p. 193 and onwards.

⁴ T. Bał-Woźniak, *Zarządzanie przedsiębiorstwem w warunkach konkurencji. Determinanty konkurencyjności przedsiębiorstw. Innowacyjność w kształtowaniu konkurencyjności przedsiębiorstwa*, Uniwersytet Warmińsko-Mazurski w Olsztynie, Olsztyn 2006, p. 552–554.

tion. According to A. Pomykalski, the strengthening of the competitive position in the given market may occur only when there is a possibility to sell a particular service or particular goods⁵. J. Bogdanienko on the other hand, emphasises a definite interdependence between innovations and competition, stating that innovations determine the competitiveness of the enterprise, which is connected with its ability to stay on the market⁶.

3. THE CONDUCTED RESEARCH

The fundamental objective of the study carried out in 2011 was to determine the level of competitiveness of Polish small and medium enterprises, in particular their innovativeness, which – according to the authors – constitutes the most important source that influences the competitive advantage of the presently operating enterprises. Determining the degree of computerisation of Polish companies, as well as indicating the obstacles detrimental to innovative activity within the context of the national economy was also important. Out of the dozens of the companies invited to participate in the study, 15 companies from the SME sector ultimately took part in the survey. Most of them – 46.6% – are micro companies that employ max. 9 employees, 26.7% – are small companies employing from 10 to 49 people and 26.7% – are medium companies with 50–249 employees. It is clear that the size of the population of the analysed companies does not allow to draw conclusions concerning the whole domestic SME sector. It provides, however, an overview of the situation and the trends in the area of innovations in this sector and it will also constitute the starting point for further research on the subject.

The results of the study allowed to determine the level of innovativeness of the surveyed small and medium enterprises.

3.1. The characteristics of the surveyed companies

Most of the surveyed companies from the SME sector were the companies classified as micro enterprises. They constituted 46.7% – almost half – of the population of the analysed companies. Their annual turnover did not exceed 2 million Euro. Small enterprises with the annual profits within the range of 2–9.9 million Euro constituted 20% of the analysed companies, which made it the smallest group. One third of the companies – 33.3% – had an annual turnover in the range of 10–49.9 million Euro. The company profits play a huge role in the implementation

⁵ A. Pomykalski, *Zarządzanie innowacjami*, Wydawnictwo Naukowe PWN, Warszawa–Łódź 2001, p. 19.

⁶ J. Bogdanienko (red.), *Zarządzanie innowacjami*, Szkoła Główna Handlowa, Warszawa 1998, p. 10.

of innovations since the less financial resources the company possesses, the more limited its project budget for innovations is.

From the perspective of the type of business activity, service companies constituted the largest group of enterprises (66.7%) that participated in the survey. The second position belonged to manufacturing companies (20%), commercial companies, however, constituted the smallest group (13.3%). The authors are of the opinion that the type of business activity should not have a strong bearing on the introduction of innovations in companies.

The surveyed companies provided responses concerning qualifications of the people employed in their firms. The questions regarding the qualifications of the company employees concerned the number of people with university degrees and experience in the research and development sector. The resulting responses indicate that half of the surveyed companies (53.3%) employ fewer than 5 people with university diplomas. The remaining companies are characterised by a similar level – approx. 15% – of university educated employees.

The structure of the employed people with experience in the R&D sector is similar. The largest percentage of companies – 86.7% – employ not more than 5 people with such knowledge and skills.

The medium-sized companies employ definitely the highest number of people with experience resulting from previous research work, project implementation and the analyses conducted in various institutions and organizations. In their case, the opportunities to employ such people are greater.

There were no cases of employees not using the Internet in the surveyed enterprises. The responses provided indicate, however, that the Internet is not essential to run a micro-enterprise. These enterprises are often commercial companies in which current accounting is run by accounting firms or persons not employed in the company.

The analysed group is characterised by the fact that business activity of medium-sized enterprises is fully based on the Internet. The Net offers tremendous opportunities that are used by medium-sized companies as the base for their activity. The intermediary role of the Internet solves problems associated with time and place. Thus, these enterprises have appropriately qualified and experienced staff. Moreover, they possess financial resources large enough to allow them to develop and improve the costly information and communication technology, in contrast to smaller companies making use mainly of their own capital and achieved profits that are often insufficient for the effective use of available Internet technologies.

3.2. The innovativeness of the surveyed enterprises

One of the main assumptions of the study was to determine the level of innovativeness in the SME sector. The data presented in Fig. 1 indicate that the degree of innovativeness in the surveyed companies varies greatly. Companies that

employ fewer than 10 people are usually not innovative. The entrepreneurs admit that they cannot introduce innovations in their companies as it is a long process that requires large expenditure and involvement. These companies – for various reasons – do not place emphasis on novelties and improvements, unlike the medium-sized enterprises.

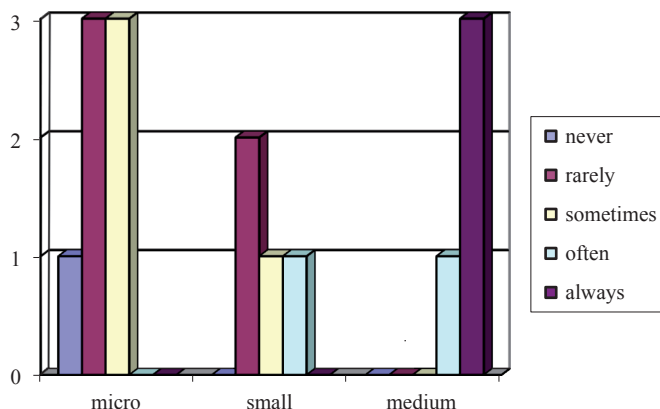


Fig. 1. Degree of innovation implementation in the surveyed companies

The research, as well as the interviews carried out with the managers, indicate that the innovativeness in the analysed medium enterprises is on the medium level. The entrepreneurs are very much aware that unless they introduce novelties and improvements, they will not be able to increase their market presence. There are several reasons for the introduction of innovations in a company. The most important, however, is the market-enforced progress which makes entrepreneurs incur expenditure in order to implement an innovative process. Another reason is the cost reduction of running business activity and increasing the company's profits.

One of the other questions in the questionnaire concerned investment in business activity. The data presented in Fig. 2 indicate that the entrepreneurs often invest in staff training in the area of technology, machines and equipment and that they incur significant expenditure on machines, equipment, as well as buildings and land. Significantly smaller funds are allocated to research and development, purchase of ready-made technologies in the form of documentations and rights to intellectual property. It indicates that the entrepreneurs invest their profits in material assets instead of trying to develop their companies on a larger scale based on the results of the work carried out by the world of science.

The strength of product innovation ensures the strengthening of the competitive position of the company, which allows it to stay on the market. Despite the low innovativeness of Polish small and medium enterprises, the entrepreneurs express a lot of interest in product innovations. They are mostly interested in upgrading their current products and services as life cycles of products become increasingly

shorter. The degree of the interest of the surveyed companies in the introduction of product innovations is presented in Fig. 3.

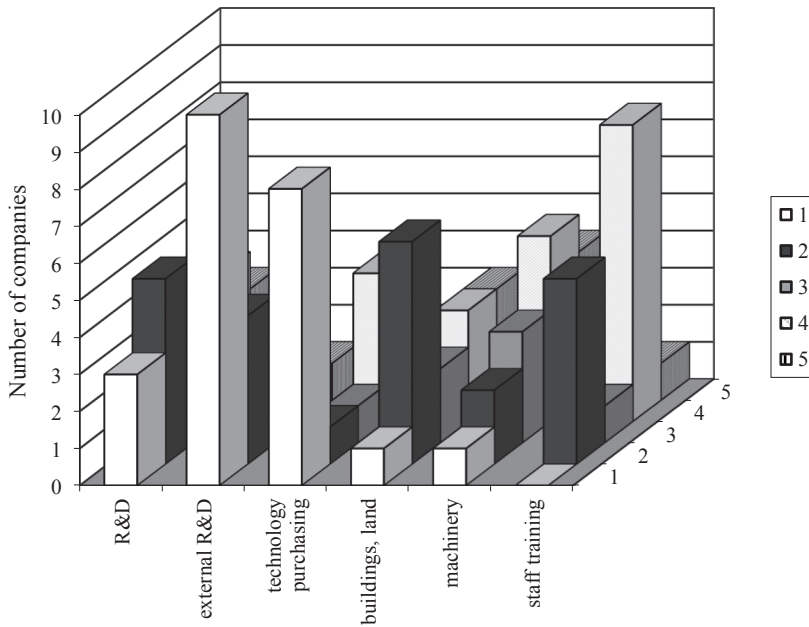


Fig. 2. Structure of companies by expenditure on innovation (1 – never, 2 – rarely, 3 – sometimes, 4 – often, 5 – very often)

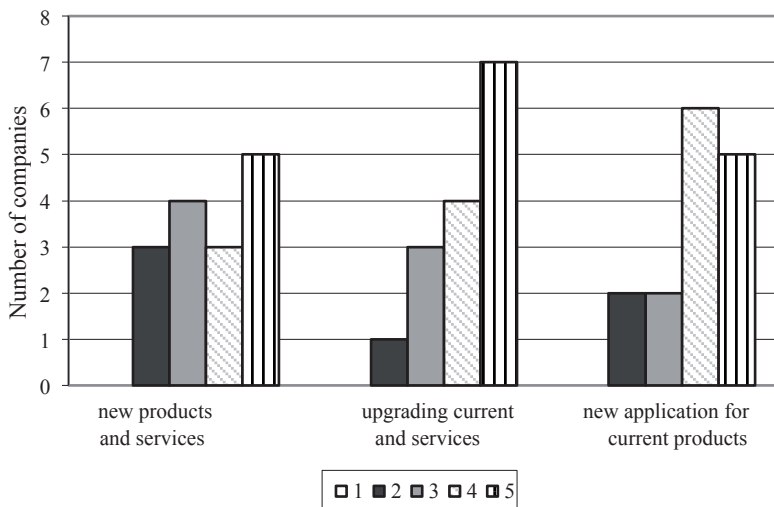


Fig. 3. Interest of the surveyed companies in introducing product innovations (1 – no interest, 5 – the highest interest)

Process innovations are also often introduced in small and medium enterprises. The strength of process innovations ensures the reduction of costs incurred by the company and has a positive impact on the increase in quality. Most entrepreneurs make great effort to improve and modernise the logistics, current production processes and services provided. This relationship is illustrated by Fig. 4.

The study concerning organisational innovations (Fig. 5) indicates that the introduction of new rules that increase the skills and knowledge of employees, as well as the improvement in planning the work and the scope of activities, arise the greatest amount of interest. The entrepreneurs are less interested in the introduction of new organisational methods concerning the cooperation with research institutions.

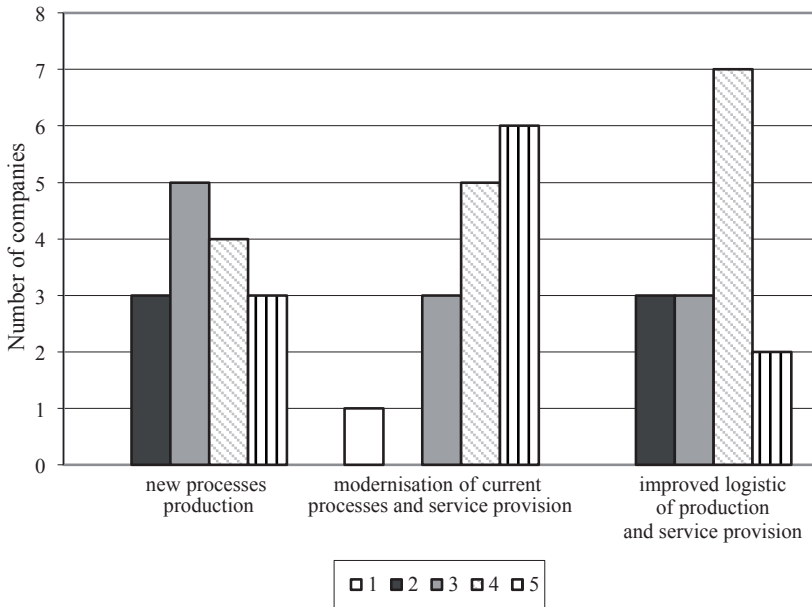


Fig. 4. Structure of the surveyed companies according to the type of process innovations introduced (1 – no interest, 5 – the highest interest)

The entrepreneurs are aware that organisational innovations in many cases require no additional financial expenditure.

Marketing innovations are rarely implemented in companies that belong to the SME sector. The sources of these innovations can be found everywhere but it is difficult to notice them in everyday life. They do not have to originate in laboratories or R&D institutions. As a rule, they are the least costly but entrepreneurs

rarely implement these innovations as they raise their concerns. Another reason is also the lack of knowledge in this area.

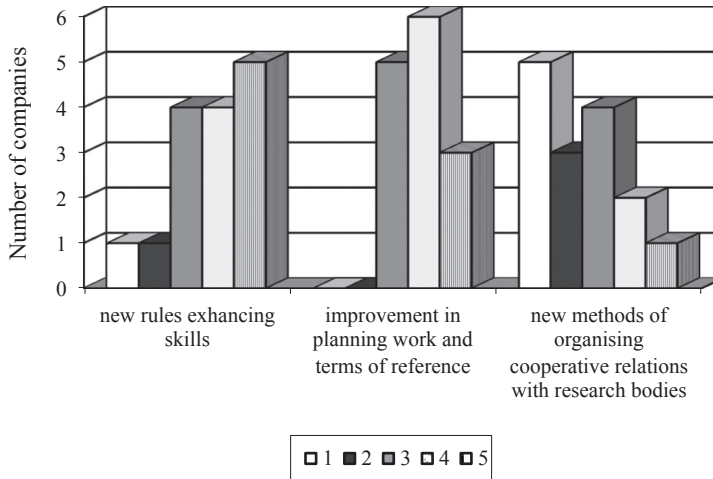


Fig. 5. Structure of the surveyed companies according to the type of organisational innovations introduced (1 – no interest, 5 – the highest interest)

The relevant relationships concerning marketing innovations are presented in Fig. 6.

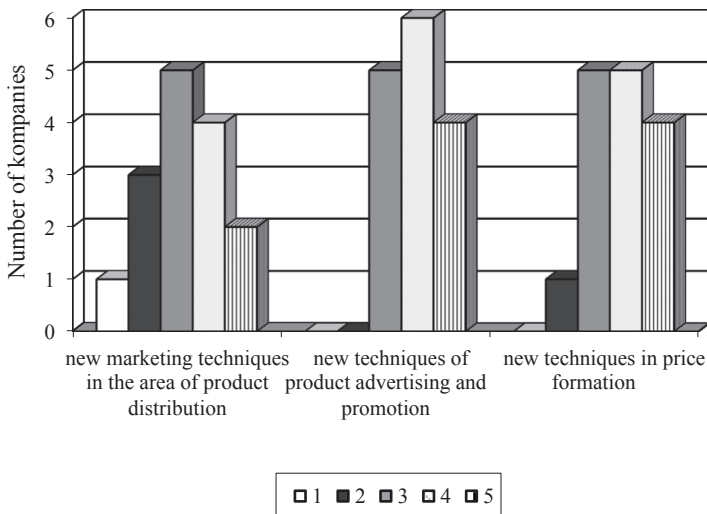


Fig. 6. Number of companies interested in introducing marketing innovations (1 – no interest, 5 – the highest interest)

3.3. The sources of information used in the innovative activity of the surveyed companies

Regardless of the size of the company: micro, small, medium or large, information is one of the most important elements that determine the introduction of innovations in companies.

The results of the conducted research presented in Fig. 7 indicate that – in terms of the use of sources providing information on innovations – the Internet is the most popular tool, it is used by approx. 95% of the surveyed companies.

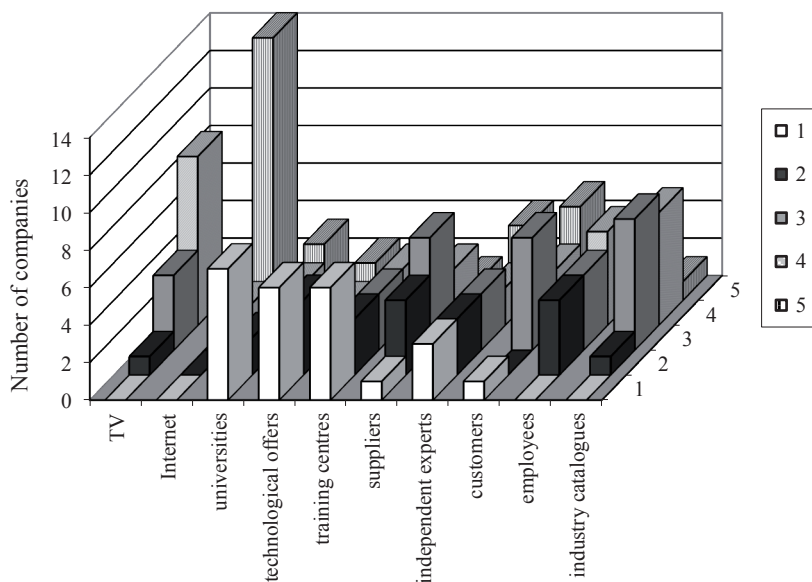


Fig. 7. Structure of the surveyed companies according to the sources of information concerning innovations used (1 – the least useful, 5 – the most useful)

The Internet is mainly used for electronic banking, contact with customers and suppliers, as well as to make use of documents and forms of various institutions.

Television is also quite popular among the entrepreneurs as a good source of information. The survey respondents state that these sources play a significant role in the undertaken innovative activities.

Many representatives of small enterprises consider universities, technological offers presented by R&D institutions, as well as training and consulting centres, as the least useful sources of new information concerning innovations. It should be noted that this assessment is provided mainly by the entrepreneurs running micro enterprises, in which the degree of innovativeness is low, who usually do not make use of the assistance of research organisations and institutions.

3.4. The cooperation with organisations and institutions

Most of the studied entrepreneurs from the SME sector declared that they did not cooperate with any organisations and institutions that dealt with innovation supply. The small enterprises often did not even look for such cooperation and did not try to establish such relations, particularly in the case of one-person or multi-person companies. Unfortunately, only few companies stated that they often used consulting services and cooperated with universities. These results are presented in Fig. 8. It can be seen that as enterprises grow, their propensity for cooperation with other entities grows as well. The entrepreneurs believed that this trend would only increase in the future. E. Stawasz presents similar correlations in his papers⁷.

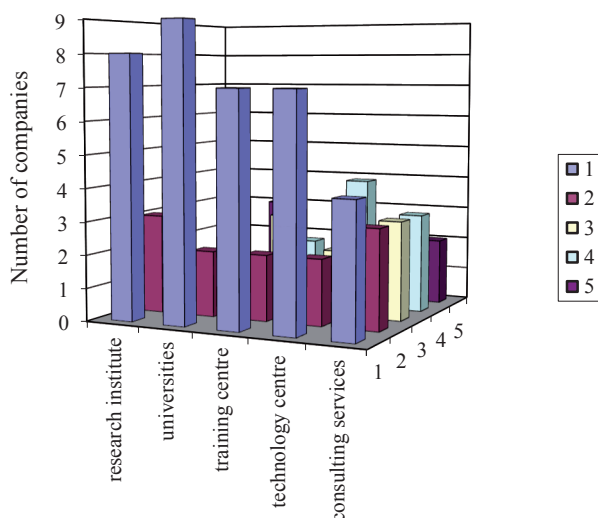


Fig. 8. Structure of the analysed companies according to their cooperation with organisations and institutions (1 – never, 2 – rarely, 3 – sometimes, 4 – often, 5 – always)

3.5. The benefits and obstacles connected with the introduction of innovations

The conducted research provided the answer to the question what benefits come from the introduction of innovations in the enterprise. An increase in turnover was seen as the main and the most important benefit by the respondents

⁷ E. Stawasz, *Innowacje a mała firma*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1999, p. 70–75; see also M. Dworczyk, R. Szlaska, *Zarządzanie innowacjami. Wpływ innowacji na wzrost konkurencyjności przedsiębiorstw*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2001, p. 118.

– almost 75% of the responses. Capturing new markets (60%) and improving the company's image (67%) were also perceived as important factors by the entrepreneurs. It should be also noted that all the types of benefits are seen as relevant in the studied enterprises. The results of the assessment of benefits are presented in Fig. 9.

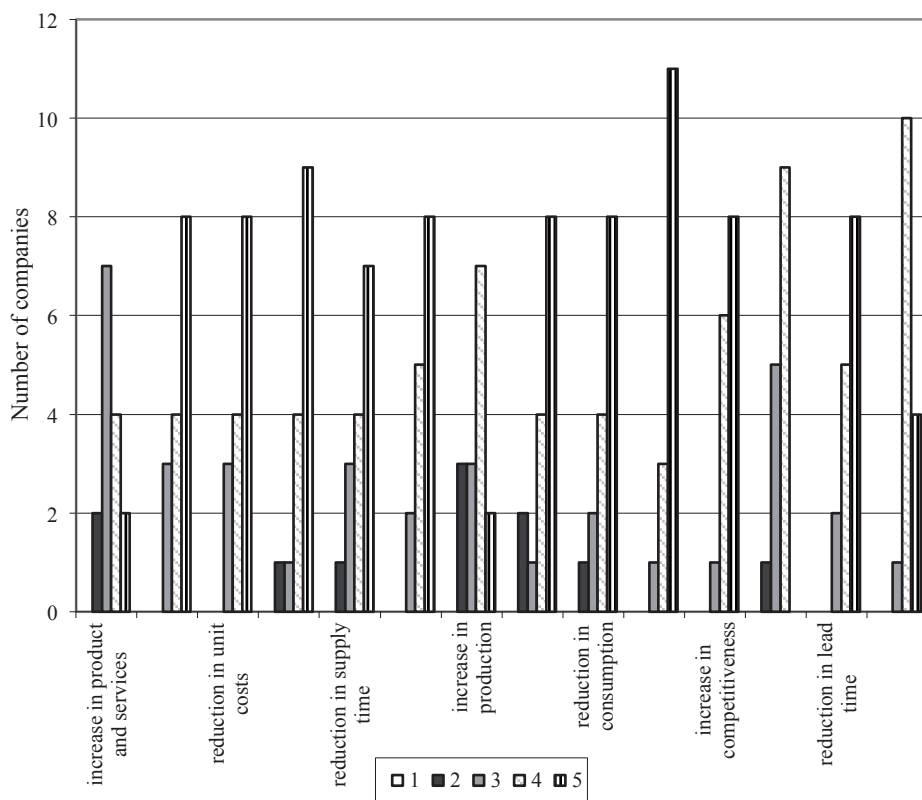


Fig. 9. Types of benefits from introducing innovations and their significance (1 – irrelevant, 2 – low, 3 – moderate, 4 – high, 5 – very high)

Unfortunately, due to the existing barriers, companies not always can implement the process of innovation. The main reason why the entrepreneurs refrain from introducing the process of innovation in their business activities is the lack of financial resources. Approx. 95% of the surveyed companies stated so. Problems with acquiring external sources of funding are – according to the respondents – another reason for resigning from the introduction of novelties. This obstacle was seen as important by 80% of the respondents. This relationship is presented in Fig. 10. Other significant barriers are also: high risk connected with innovative activities, capturing the market by dominant companies and the lack of market

demand for new products. Based on the conducted research, it can be said that the entrepreneurs noticed the lack of efficiently functioning support system that would offer non-refundable loans or loan funds allocated to innovative activities.

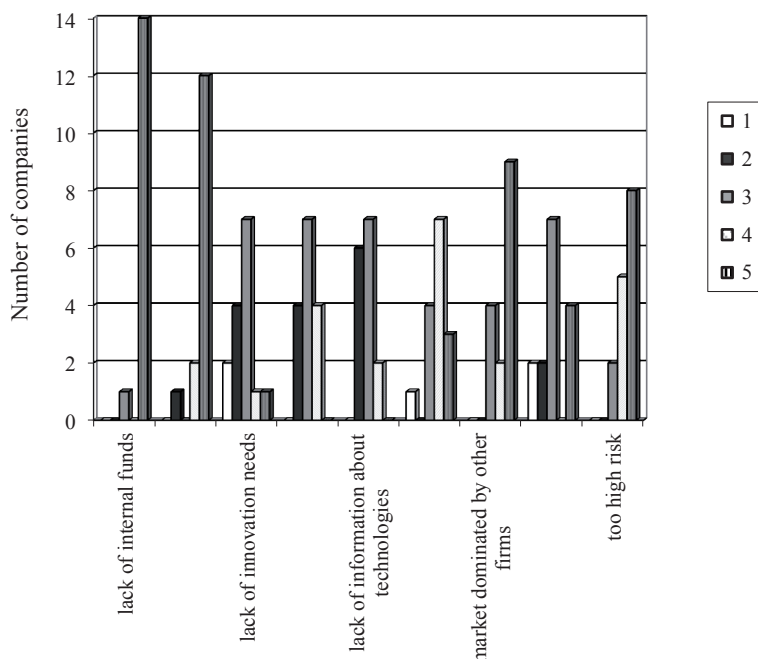


Fig. 10. Obstacles that make the introduction of innovations in the companies difficult
(1 – irrelevant, 2 – low, 3 – moderate, 4 – high, 5 – very high)

3.6. The financing of innovations in the surveyed companies

Assessing methods of financing innovations used by the entrepreneurs, it can be said that the funds for innovative activity usually come from the company's own financial resources. It probably constitutes one of the main reasons for a low level of innovative activity in the domestic SME sector. The entrepreneurs that employ fewer than 10 people usually do not possess their own financial resources for innovative activity. A small number of the companies making use of financial assistance, including European funds, is also surprising. The enterprises that stated that they made use of such assistance belong to the group of medium enterprises. They often employ people with experience in the R&D sector, conduct research and development activity themselves, as well as commission such activity from external firms. The medium enterprises state that they have a possibility to develop,

see the benefits connected with using the company's image as an innovative enterprise and do not resign from implementing innovative processes. The sources of financing innovations mentioned by the respondents are presented in Fig. 11.

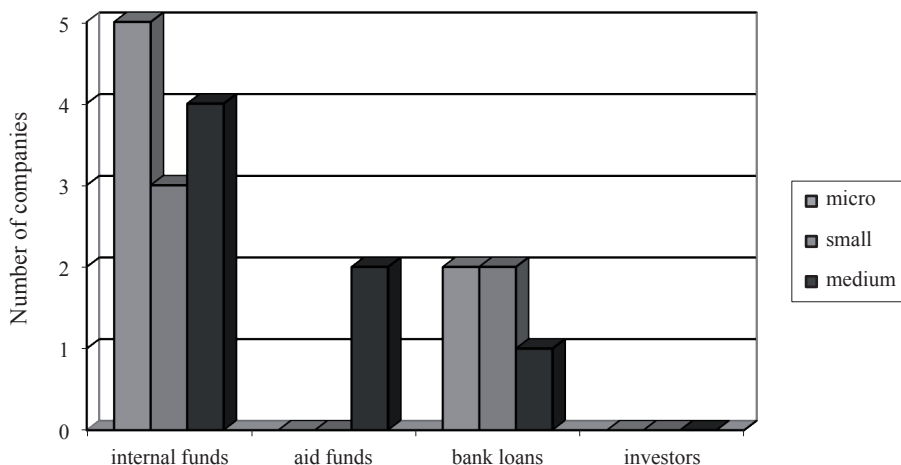


Fig. 11. Methods of financing innovations

4. CONCLUSION

The results of the conducted survey research illustrate the innovative potential of the companies in the SME sector. Many entrepreneurs define their companies as modern and innovative, which increases their competitive advantage and allows to operate on the Polish market.

The results of the study indicate that Polish companies from the SME sector allocate very little funding on research and development of their business activity. Very few entrepreneurs decide to cooperate with R&D institutions and others often have no interest in the results of research conducted by these entities.

The determination of sources providing information on novelties and innovations used by the entrepreneurs was an important part of the research. The study has revealed that approx. 95% of the surveyed companies derive their knowledge from the Internet and that it is used for many activities related to running a business, which is a positive phenomenon as the world market is based on the Internet.

Determining the obstacles that decrease the interest in the R&D area and the problems that make the introduction of novelties difficult was an important issue analysed in the study. The largest barrier is the lack of internal financial resources (more than 90% of the enterprises consider it as the dominant obstacle), other obstacles also include difficulties with finding external sources of funding,

high risk connected with the introduction of innovations and the entrepreneur's awareness that the market is dominated by other companies.

Polish small and medium enterprises have the opportunity to become innovative companies, they ought to receive, however, more state assistance in terms of co-financing for innovations, training and acquisition of knowledge concerning the existing possibilities to undertake innovative activity.

Small and medium enterprises, driving the constant economic growth and development, play a major role in the global economy. They are very flexible and easily respond to constant changes and market demands. It is recognised that the introduction of innovations in enterprises is the guarantee of their survival on the market as it makes them much more competitive.

Innovativeness of the Polish economy compared to the EU countries is low. The level of innovation, however, of national small and medium-sized enterprises is very diverse. The type of business activity has no significant impact on the introduction of novelties. The size of the enterprise, as well as of the workforce, however, is important. The most innovative are medium-sized companies with 50–249 employees and an annual turnover of less than 50 million Euro.

It can be assumed that entrepreneurs make the mistake of investing in material things without allocating their profits to research and development activity, not to mention cooperation with R&D institutions, which may have a great impact on the development of enterprises. Despite the fact that innovativeness in Poland is low, the interest in the introduction of novelties, as well as improvement and modernisation is relatively high. The entrepreneurs are aware that the implementation of product, process, organisational and marketing innovations results in the significant strengthening of their competitive market position and, above all, ensures the survival of the company on the market.

Regrettably, due to the existing barriers, entrepreneurs not always have the ability to introduce innovations in their companies. The lack of financial resources, problems with initiating cooperation with external companies, excessive risk connected with innovative activities, as well as capturing the market by dominant firms, are the main obstacles that make the implementation of novelties difficult in small and medium enterprises. It should also be noted that entrepreneurs rarely appreciate and avail of marketing innovations.

It is important that entrepreneurs introducing innovations notice the associated benefits. They consider a considerable increase in their turnover as the most significant factor. Innovations enable them to capture new markets, improve the company's image and the quality of its products and services, as well as reduce costs of supplies, production and distribution. Other positive factors that contribute to the satisfaction of entrepreneurs are also important. The introduction of innovation makes enterprises more competitive, which increases their opportunities for growth and operating in the domestic and global market.

REFERENCES

- Bal-Woźniak T., *Zarządzanie przedsiębiorstwem w warunkach konkurencji. Determinanty konkurencyjności przedsiębiorstw. Innowacyjność w kształtowaniu konkurencyjności przedsiębiorstwa*, Uniwersytet Warmińsko-Mazurski w Olsztynie, Olsztyn 2006, p. 552–554.
- Baruk J., *Zarządzanie działalnością innowacyjną*, [in:] M. Brzeziński (red.), *Zarządzanie innowacjami technicznymi i organizacyjnymi*, Difin, Warszawa 2001.
- Bogdanienko J. (red.), *Zarządzanie innowacjami*, Szkoła Główna Handlowa, Warszawa 1998, p. 10.
- Brdulak H., Gołębiowski T., *Wspólna Europa. Innowacyjność w działalności przedsiębiorstw*, Difin, Warszawa 2003, p. 15–18.
- Brzeziński M. (red.), *Zarządzanie innowacjami technicznymi i organizacyjnymi*, Difin, Warszawa 2001.
- Conway S., Steward F., *Managing and shaping innovation*, Oxford University Press, Oxford 2009.
- Dworczyk M., Szłasa R., *Zarządzanie innowacjami. Wpływ innowacji na wzrost konkurencyjności przedsiębiorstw*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2001.
- Pomykański A., *Zarządzanie innowacjami*, Wydawnictwo Naukowe PWN, Warszawa–Łódź 2001.
- Stawasz E., *Innowacje a mała firma*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 1999.
- Świtalski W., *Innowacje i konkurencyjność*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2005.

Jan Mertl

**INNOWACYJNOŚĆ MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW SPOSOBEM
NA PODNIESIENIE ICH KONKURENCYJNOŚCI NA RYNKU**

Konkurencyjność małych i średnich przedsiębiorstw jest ściśle powiązana z możliwością wprowadzania w nich innowacji. Zagadnienia te są częścią omawianej w artykule analizy opartej na badaniach ankietowych oraz rozmowach, przeprowadzonych w losowo wybranych firmach z sektora MŚP. Celem tych badań było stwierdzenie, jaki jest poziom innowacyjności polskich przedsiębiorstw oraz czy firmy wprowadzające innowacje zwiększają swoją konkurencyjność na poszerzającym się rynku. Określono również przeszkody utrudniające prowadzenie działalności innowacyjnej oraz źródła wykorzystywane przez MŚP do finansowania nowych rozwiązań. Stosunkowo niski poziom innowacyjności polskich MŚP związany jest głównie z brakiem odpowiednich środków finansowych, wysokim ryzykiem oraz brakiem współpracy firm z instytucjami badawczo-rozwojowymi.